

different stages of development of the same entity, is to be found in the circumstance that the growth of the stages into each other was not followed by experiment, but only imagined to ensue—a mode of proceeding always liable to error in inexperienced hands."

21. *Cholera (?) Corpuscles.*—Dr. ROBERTSON exhibited, under the microscope, to the Med.-Chirurg. Soc. Edinburgh (Dec. 19, 1849), a specimen of the so-called cholera bodies, from some fluid from the intestines of a cholera patient, recently sent to Dr. Bennett, by Mr. Swayne of Bristol. The report of the committee of the London College of Physicians had completely exploded the theory which connected these bodies with the pathology of cholera. The origin of many of the bodies described by the Bristol microscopists, and recognized elsewhere, had been clearly pointed out; yet some mystery seemed still to hang over the large brown corpuscles figured by Mr. Swayne, and now exhibited. Mr. Berkeley, the eminent mycologist, had not as yet determined their precise nature. As their very presence was quite exceptional, they, of course, could not be admitted as the cause of cholera.—*Monthly Journ.*, Feb. 1850.

22. *Gutta Percha Stethoscope.*—Dr. BENSON exhibited to the Surgical Society of Ireland (Dec. 15, 1849) a stethoscope formed of gutta percha, which he regarded as a most valuable instrument, and which he felt sure would speedily come into general use. It was more comfortable to the ear of the doctor, pleasanter to the chest of the patient, and in every point of view equal to the instruments at present in use. It conducted the sounds as well as any stethoscope he ever employed, and could be manufactured by any person at a cost of a few pence, or purchased at a moderate price, of a neat and elegant form, at Bewley and Evans's.—*Dublin Medical Press*, Jan. 2, 1850.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

23. *Aneurism of the Popliteal Space treated successfully by Compression.*—Mr. BANON communicated to the Surgical Society of Ireland (Nov. 17th, 1849) a very interesting case of this. The subject of it was a labourer, 27 years of age, admitted into Jervis Street Hospital, Sept. 11th, 1849. He stated that, fifteen weeks previously, he had suffered from a stiffness of the left knee, accompanied by shooting pains towards the ankle, which he attributed to a strain while lifting a heavy weight. Three or four days subsequently, he first observed a tumour about the size of a walnut in the ham of the same limb. In a fortnight, the swelling had attained the size of an apple. The leg and foot became somewhat swollen, and the stiffness in the knee had increased, with a sense of numbness. An unusual throbbing in the part at this time also attracted his attention. He acknowledged that he had drunk freely for several years, but stated that his general health had been invariably good. Upon a careful examination of the chest, no disease of the lungs or heart could be detected, and, indeed, all his vital organs appeared in a healthy state. He was induced to apply for medical relief by the alarm which the rapid increase of the aneurism had latterly occasioned him. Upon examination, a tumour, fully the size of a very large orange, was seen pulsating in and occupying the entire of the left popliteal space. It was soft and yielding over its whole surface, and capable of being considerably diminished by pressure. A very loud bruit de soufflet was audible on applying the stethoscope. Pressure on the femoral artery caused a considerable diminution in size and a cessation of all pulsation in the tumour. The leg and foot were somewhat oedematous, and he complained much of pain about the knee and ankle.

Sept. 14th. He was bled to ten ounces, and ordered a drachm of compound powder of jalap, and directed to be put on low diet.

16th. At eleven o'clock this morning, I commenced compression of the femoral artery by the application of two clamps—one adjusted to pass round the

pelvis, and to make pressure immediately below Poupart's ligament; the other (Mr. Carte's) was brought to bear on the vessel about the middle of the thigh. The usual mode of relaxing one instrument after having screwed down the other, was followed, and carefully attended to by our resident pupil, Mr. Fitz-gibbon, and by this means a certain amount of pressure was constantly kept up on the artery until eleven o'clock at night, but at no time to such an extent as to stop all pulsation in the tumour. After having thus borne the pressure for twelve hours, he became restless and uneasy, and the swelling of the leg having increased, accompanied by venous congestion, the instruments were both relaxed, and only again screwed down at intervals during the night.

17th. He had no sleep during the last night, although a full anodyne had been administered. The pulsation is somewhat less, and the aneurism no longer yields to the slightest pressure as before, having become decidedly firmer.

On examination of the limb, the œdema is still present. The articular arteries are felt pulsating on each side of the joint. Pressure was again applied and continued by the alternate action of the clamps.

18th. œdema increased; patient complained more of the numbness and shooting pains. He was, however, anxious that the compression of the artery should be continued, on relaxing which for a moment, for the first time since yesterday morning, a greater degree of firmness of the tumour is observed, and a much fainter pulsation. The bruit de soufflet, before so loud, is now scarcely audible.

20th. The pressure has been kept up without intermission, since last report, day and night, the only unpleasant effects being loss of rest and a burning pain in the knee, with an increase of the œdematosus swelling. The temperature of the leg and foot was at times somewhat lower than that of the opposite limb. Warm jars were applied, from which he derived much comfort. Our patient had now been three days and nights without any sleep whatever. I therefore directed that the instruments should be both loosened, on doing which scarcely any pulsation returned to the aneurism. The pressure had been scarcely removed from the limb when he fell into a profound sleep, of which our resident pupil adroitly took advantage by screwing down Carte's instrument rather tightly on the artery, without, however, awaking him for six hours, when we had the pleasure to find that all pulsation had ceased in the tumour, nor did it ever subsequently return.

A slight pressure was kept up for a day or two longer, when the instruments were finally taken off. The œdematosus swelling of the limb disappeared rapidly. The swelling in the popliteal space, up to the time of his leaving the hospital on the 1st of October, continued to diminish in size, and became harder, and every day he was regaining the use of the limb. I have since watched this man's progress, and found it to be most satisfactory. The tumour has become gradually smaller, and is now of so little inconvenience that he is able to work at the custom-house docks, where he is obliged frequently to carry very heavy loads. A cast, taken a month subsequent to his leaving the hospital, which I now exhibit, shows that the original size of the tumour had diminished at least one-half. Through some inadvertence, a cast was not taken previous to the application of compression.

I should here mention that the pulsation of the femoral artery could be distinctly felt, after the instruments had been finally removed from the limb, over its whole course until it approached the popliteal space; thus proving that no such thing as obliteration of the vessel at the seat of pressure takes place, the process of cure occasioning it only in the situation of the aneurism, where it converts the artery into an impervious ligamentous cord.

Mr. B., in his remarks on this case, observed that "the fact of the whole tumour having become solid in less than four days after its first application, is a circumstance which should be noted by those who consider the proceeding both irksome and tedious, and consequently inferior to the ligature, and should, in my opinion, go far to convert the most skeptical. It will be always necessary to observe caution as to the use of too great a degree of pressure, as abrasion, or even sloughing, may be the consequence. The œdema, the purplish

hue of the limb, the falling of the temperature, all present in this case, should be watched with the greatest anxiety. I considered myself justified in continuing the pressure under these circumstances, from having been able to feel the pulsation in the articular arteries and anterior tibial, the former of which were apparently increased in size; thus showing the activity of the collateral circulation going on in the limb; but, had the decrease in temperature become more marked, I should, of course, have relaxed the clamps."—*Dublin Medical Press*, Nov. 28th, 1849.

24. *Popliteal Aneurism treated by Compression.*—Another case of popliteal aneurism treated by compression was communicated to the Surgical Society of Ireland (Jan. 26th, 1850), by JOHN MADDEN, Assistant Surgeon 43d Light Infantry. The subject of it was Corporal Thomas Beustead of his regiment, aged 32, who had been in the service thirteen years, and was admitted into hospital Dec. 29, 1849, with aneurism of right leg. "His limb was rather swollen and oedematous; keeps it in the semiflexed position, and appears unable to extend it; tumour in ham about the size of a small orange, pulsatile and painful, considerable pain being referred to front part of foot and toes; complexion sallow; skin moist; tongue foul; bowels confined; pulse 90, rather weak; action of heart normal; temperature of affected limb the same as the opposite one.

"The patient was purged and ordered a diaphoretic mixture. On the 7th of January, the patient continuing in the same condition, Dr. Carte's improved instrument for compressing the arteries was applied to the femoral below the giving off of the profunda, and Messrs. Read's to that portion of the vessel as it passes over the ramus of the pubis, the pressure being intended to alternate, so as to relieve one site of pressure by the substitution of the other. The diaphoretic mixture and anodyne draught at night to be continued.

"8th. Patient bears the pressure better than was expected: it is kept up so as to allow a slight or rather feeble current through the artery, according to the plan advised by Dr. Bellingham. Bowels not open; pulse 82, rather weak; the pressure is alternated and changed in site, according to the feeling of the patient; did not sleep well last night. Ordered to have an aperient draught in effervescence, and afterwards a cathartic enema; anodyne draught at bedtime as before.

"9th. Pressure kept up as on previous days; has had much pain during the night, which he refers to the calf of the leg; limb rather more oedematous; tongue pale, but coated; pulse 84, and weak. Ordered to have imperial drink as much as he pleases; anodyne to be repeated at night.

"10th. There is considerable swelling of limb, especially about the knee, with slight yellow tinge on outer edge of popliteal space; complains of pain in limb, and also in epigastric region; pulse 80, weak; pulsation felt in tumour, which is soft and compressible; bowels not open enough. Ordered an oil draught with peppermint water, and acet. morphiae solution at bedtime.

"11th. Appears better; tumour diminished, and the pulsation in it feeble; limb swelled about calf and knee; pressure still kept up; pulse 84; temperature of limb undiminished; bowels well open. Acet. morphiae solution to be repeated at night.

"12th. Patient has a good deal of fever; increased pain of leg, especially of calf; has had rigors during the night; pulse 110; tongue very dry and furred; looks distressed; bowels not open. On examining the limb, there is slightly increased temperature; the swollen appearance is less than yesterday; tumour seems also less; there is scarcely any thrill in it, although the pressure has been removed for some time, he having removed the instrument at three A. M. Tepid sponging ordered to limb; to have effervescent draughts three times a-day, and a common enema; repeat the morphiae solution at bedtime; to take chicken soup.

"13th. Had a good night; slept well; countenance less anxious; pulse still about 110; tongue cleaner; bowels three times opened; skin warm and moist; does not complain of pain in limb, which is still swollen from knee downwards;

foot and ankle somewhat oedematous; aneurismal tumour smaller, hard, and without any pulsation. To have the draught at bedtime, half a fowl for dinner.

"14th. Much the same; a good deal of pain in limb, and considerable oedema; tumour hard and without pulsation; bowels confined. Ordered to have a Seidlitz draught in effervescence two or three times a-day; anodyne draught at night, and chicken broth for dinner.

"15th. Bowels opened four times; did not sleep during last night; complains of pricking pain in limb, also feeling of sinking referred to epigastrium; pulse 120, weak, and without volume; no return of pulsation in the tumour. Ten drops of tinct. of digitalis in half an ounce of solution of muriate of morphia, and an ounce of peppermint water to be taken at bedtime, chicken broth for dinner, with half a gill of wine, and two ounces of arrowroot to be taken through the day.

"16th. Patient slept well during the first part of the night consecutively for four or five hours, but suffered much pain in limb since early morning; it presents a white, glazed, and oedematous appearance; integuments covering the tumour give the sense of fluctuation to the fingers; pulse 120; tongue moist; bowels not open; skin cool; a flannel bandage is applied to the limb. Diet and anodyne draught at night, as previous day.

"17th. Had a good night; pulse 120; skin warm and natural; tongue moist; bowels well open; is in no pain from limb; oedema of foot and ankle rather more than yesterday; aneurismal tumour less, and fluctuation less perceptible. Previous treatment to be continued.

"18th. Passed a very bad night. At 9 A.M., Mr. M. was suddenly summoned by the orderly to visit him; found him almost without pulse; surface covered with a cold clammy sweat; complaining of great pain in right iliac region, also in calf of affected limb. Directed he should immediately have a gill of brandy in hot water with sugar. Half-past ten A.M.: No improvement has taken place; his present state is as bad as possible; gangrene has invaded the limb, and is rapidly extending; the pulse cannot be felt; face sunken; no reaction has succeeded the administration of stimulants, brandy, &c. Half-past twelve: Discoloration has commenced in the other limb; it is rapidly extending upwards in right; pulse cannot be felt; patient is quite sensible. Brandy with hot water and sugar, carb. ammoniæ gr. viij in camphor mixture every hour, also jelly and sherry, are administered, and the limbs swathed in flannels, and bottles of warm water placed alongside them. Patient died at half-past three P.M.

"Post-mortem examination twenty-one hours after death, made by Dr. Davidson, in presence of Dr. Cane, Dr. Swettenham, Mr. Tufnell, and myself; Mr. Tufnell's zeal in the investigation of aneurismal tumours having induced him to visit Kilkenny to examine this case. The mould of this cast showing the aneurism in its recent state was taken by Mr. Tufnell; the cast itself was made by Dr. Carte.

"The body was that of a fine muscular man, and bore no unnatural appearance except in the right lower extremity, which was oedematous from the knee to the foot, measuring, as compared with the other,

	Calf.	Knee.	Thigh.
Right . . .	15 inches . . .	17 inches . . .	15½ inches
Left . . .	11 " . . .	13 " . . .	15 "

The aneurism appeared of the size of a swan's egg, forming a livid oval swelling in the fold of the right ham. There was a mark of excoriation over the femoral artery at Scarpa's space from the pad of the compressing instrument. The saphena vein was very prominent, feeling in the skin like a hard cord. No other abnormal appearance. Upon opening the thorax, the lungs and heart were found perfectly healthy, as also the pericardium. The latter membrane very thin and transparent. On tracing the aorta, however, from the anterior surface of the arch, directly opposite the orifice of the left subclavian artery, a small aneurism of the size of a nutmeg was discovered, the opening into it circular, of the dimension of a goose quill. Beyond this point, the aorta was thickened, with atheroma in its coats. The lining membrane was perfect. There was no fat on the heart.

"A small quantity of straw-coloured serum escaped when first opening the cavity of the abdomen. The peritoneum covering its parietes, as well as that of the intestines, was healthy. The viscera and intestines, also, showed no sign of disease. On removing them, however, a large fusiform mass of coagulated blood, a diffused aneurismal swelling, came into view, extending from the diaphragm to the middle of the ilium, infiltrating the psoas muscle of the right side. The aorta, when slit up, was found healthy and entire, the aneurism proceeding from the gastro-duodenalis, a branch of the hepatic artery.

"The aorta was further traced downwards to its division into the common iliacs: the internal was cut, and the examination pursued along the external and femoral downwards on right side to aneurism in ham.

"On removing the integuments of the thigh and leg as far as the calf, a quantity of serum drained away from the oedematous tissues round the knee. The aneurism presented a tumour as large as the doubled fists, but of ovoid form, extending from the level of the lower end of the femur to the centre of the gastrocnemii muscles, sinking in between the latter, pressing at the same time against the back of the knee-joint, which was healthy.

"The sac was perfect and solid. When cut into by a vertical incision, its contents were found to consist of fibrine in concentric layers to the thickness of three-fourths of an inch round the sides of the sac, whilst the centre was filled exclusively by coagulated blood.

"The femoral artery was carefully examined. First, as to its perviousness; by passing a middle-sized bougie into it from inguinal portion downwards, it was found to be perfectly pervious, and totally unaffected in its calibre to within an inch and a half of the aneurism, where the coats of the vessel were thickened. The artery was then slit open in its whole extent, and the inner surface carefully observed, more particularly at the part where pressure had been chiefly applied; but no change of any kind, or difference between this part and any other, could be perceived. On having slit up the artery at and near its junction with the aneurism, the cause of obstruction at this portion was found to be a pedicle of fibrine, extending from the aneurismal opening, and becoming smaller and finer as it extended upwards, till it terminated in a point about two inches above the aneurism.

"From what has been described, it would appear: 1st. That the patient died from the bursting of the abdominal aneurism, but whether accelerated or not by the attempted cure of the popliteal one, by no means appears.

"2dly. That no plan of treatment could have saved the patient ultimately from death by the cause stated.

"3dly. That the treatment of popliteal aneurism in this case, by pressure in groin, or three inches below it, did not morbidly affect the part of the artery pressed on, which remained pervious, and exhibited no change of structure whatever.

"4thly. The healthy and unaffected condition of the artery, at the point of pressure, refutes the statement of those pathologists who state that pressure injures the vessel in case it should be subsequently necessary to operate on it.

"5thly. That the aneurism in ham was in that process of cure by the gradual deposition of layers of fibrine proceeding from surface to centre of sac.

"6thly. That the inch and half of vessel rendered impervious immediately above the aneurism, contained a pedicle or cone of same substance (fibrine), which occasioned the obstruction of its contents."—*Dublin Medical Press*, Feb. 6th, 1850.

25. *Chronic Hydrocephalus—Tapping—Death.*—Mr. J. H. TAYLOR exhibited to the Liverpool Med. and Path. Society a child aged eight years, healthy, except in its head, which was of great size, and hydrocephalic. At a subsequent meeting, he stated that, on tapping the tumour, about a quart of fluid escaped, and the child began to sink in a few hours; and, though stimulants and other appropriate treatment were adopted, it died in thirty-six hours. He illustrated this sudden sinking by the case of a man in Winchester, who had retention of urine for twenty-four hours, the whole of which was withdrawn at one time by a catheter. He began to sink soon after, and died in a few hours. On a post-

mortem examination, no injury to any part could be discovered. The effect of the sudden withdrawal of the fluid in ascites is familiar to the profession.—*Lond. Med. Gaz.*, Jan., 1850.

26. *Tapping in Spina Bifida*.—Dr. NEVINS mentioned to the Liverpool Med. and Path. Society (Dec. 13th, 1849), three cases of spina bifida in illustration of the effects of tapping. A gentleman in Dublin, aged 40 years, had the sac punctured when a child, but he did not remember how often. When Dr. Nevins saw the case, the sac had for many years been contracted, and formed nothing but a fold of skin. The canal of the spine was not perfectly closed by bone, but there was no protrusion of the membranes. He enjoyed full health.

Two children at Guy's had been treated in the same way under the care of Dr. W. J. Iliff. One of them, when three weeks old, was tapped, which was repeated eight or nine times, when it died. The other, when four weeks old, was tapped, and the operation was repeated eight or nine times in it. At the end of three or four months, it was seen, and continued quite well, with the sac contracted.

Dr. DICKENSON had had a child tapped three times for chronic hydrocephalus, but no permanent benefit resulted, and it died at last of pneumonia.

Mr. ELLISON saw the child now before the Society, at the time of its birth, when there was no appearance of the disease, which appeared when it was a few months old. It was then tapped three times without any bad symptoms, but the fluid always re-collected, though pressure was steadily employed.

Mr. BANNER could not see what benefit was likely to result from tapping. He had often seen it employed in cases of spina bifida without advantage.

Mr. ELLIS JONES related the case of an infant whose spina bifida he had tapped. Inflammation and mortification ensued, and the child died.—*Lond. Med. Gaz.*, Jan., 1850.

27. *A Case of Dislocation of the Neck successfully treated by Mechanical Means*.—The following remarkable case is anonymously published in the *Lancet* of June 30th, 1849 :—

“ Geo. L_____, wt. 46, able seaman, of a stout, muscular conformation, with a short, bull kind of neck. On the evening of the 10th of Nov., 1847 (ship at sea), whilst descending the fore-ladder, he fell forwards, with his foot catching between the steps, and pitched on the right side of the head, without inflicting any wound on the scalp; when taken up, he was found to be quite helpless, and, on being brought into the sick-birth, the chief seat of pain was referred to the back of the neck, which, on examination, presented considerable irregularity of the spinous processes of the fifth and sixth cervical vertebrae, with a bulging of the muscles on the right side, corresponding to the position of the transverse processes of the above-named vertebrae. Prior to my arrival, in attendance on the patient, a crepitus had been twice detected by the assistant-surgeon, at the seat of injury, and pressure caused severe pricking and lancinating pains to extend down both arms to the fingers' ends; these were felt most acutely on the left extremity. The slightest movement of the head caused great agony. The following were amongst the most prominent of the symptoms resulting from the accident: Numbness of superior extremities, with nearly total loss of their motive power; but not completely so, as he could raise the arms in a slight degree, when desired; the ability to grasp any object with the hands was, however, entirely lost, more particularly so in the right hand. Paralysis of the lower extremities; partial of the left leg, but complete of the right one, which remained, when the patient was seated, doubled under the chair, without his having the power to alter its position, though frequently requested to do so. Pulse slow and small. Pupils irregular; the right more contracted than the left, with less sensibility to the stimulus of light. Face turned towards the point of the shoulder, with the head bent forward on the chest; respiration natural; questions answered coherently.

“ Extension was made, by suspending the patient in the broad fold of a sheet, passed under the chin, and up by the sides of the head; the two ends being then secured together, and placed on a hook in a beam immediately over him,

the chair on which he was seated was gradually removed, so that the loop of the sheet, with the chin resting in it, had the whole weight of his body, the legs remaining powerless from paralysis, trailing on the deck; the shoulders were now gently rotated, and pressure was made, at the same time, with my thumbs on the swelling in the right side of the neck, which by degrees receded. These measures could be only persevered in for a short time, but they soon removed the irregularity of the spinous processes, and the bulging of the vertebrae. He now quietly regained the use of the lower extremities, and expressed a desire to pass his urine; with assistance, he walked to the water-closet close at hand. The numbness of the upper extremities continued for some time longer, though not to the same extent as at first, and the power of grasping was very much improved.

"I placed him in a cot, on his back, with the head in an easy position, where he remained for a period of about five weeks. Leeches were applied, twice or thrice, over the seat of injury, on the first few days succeeding the accident. By the end of six weeks he returned to his duties, with all his motive powers restored, excepting, perhaps, a slightly diminished ability to grasp strongly with the hands, and a numbness, or rather total want of sensation, at the tip of the forefinger; this insensible spot was not larger than a good-sized pin's head. I ought to have mentioned above, that, during the time he was suspended in the sheet, the assistant-surgeon, from whom I received valuable aid on the occasion, placed himself in front of the patient, to watch closely any unpleasant symptoms that might arise from the pressure under the chin.

"During the time this man remained under my observation, on board the ship, subsequent to his return to duty, I noticed that he never carried his head perfectly straight, as he naturally did before the accident; but this was only to be detected by a very close and attentive observer. The man himself would not admit the defect.

"He is now serving on board H.M.S. Hastings, in the East Indies."—*Ranking's Abstract*, art. 67.

28. *Gastrotomy for Impassable Stricture of the Oesophagus—Death in 24 hours.*—Encouraged by experiments made upon the lower animals, M. SÉDILLOT, of Strasbourg, has proposed to make an artificial opening through the abdominal parieties into the human stomach, for the purpose of introducing articles of food, in cases of irremediable obstruction of the oesophagus. He has lately performed this operation upon the living subject. The patient, a man of fifty-two years of age, had for a year suffered from the ordinary symptoms of stricture of the oesophagus, and for the five weeks immediately preceding the operation, even small quantities of fluid had been with the utmost difficulty taken into the stomach. Catheterism of the oesophagus was thrice attempted, but always failed. The state of emaciation to which the patient was reduced may be judged of by the fact that, since the commencement of his sufferings, his weight had fallen from 220 to 112 pounds.

An operation having been determined on, the patient was put under the influence of chloroform, and a crucial incision, about an inch and a-half in diameter, was then made, about two and a-half inches below, and outside, the extremity of the ensiform cartilage. The four flaps of integument were held back by hooks, and the operator then successively divided the aponeurosis covering the left (?) rectus muscle, the rectus muscle itself, the aponeurosis beneath the muscle, and finally the peritoneum. A single vessel required ligature. The great omentum was next seen, at a considerable depth from the abdominal parieties. It was seized with a blunt hook, and gentle traction being made upon it, a portion of the great curvature of the stomach was brought into view. Selecting a point on the anterior surface of the stomach corresponding to the line of union between its cardiae and pyloric portions, M. Sédillot punctured the viscera, and introduced a canula. The operation was performed at ten o'clock in the morning, and occupied nearly an hour. During the day, the state of the patient was satisfactory, and in the evening, when the abdomen was examined, it was free from pain. A little "eau sucrée" and chicken soup was several times injected into the stomach through the canula. The patient, in the early

part of the evening, was cheerful and free from pain, fell asleep about midnight, but wakened with a start about four A.M., demanding air, and complaining of a burning sensation in the vicinity of the wound. At six A.M., paroxysms of dyspnoea threatening suffocation; respiration noisy and accelerated; coldness of extremities. At half past seven, the patient died, sinking finally without suffering.

On dissection, there was found some redness of the outer surface of the stomach, and slight ecchymosis around the canula; but no opacity, exudation, adhesion, or other sign of abdominal inflammation. The oesophagus was compressed by a firm cancerous tumour opposite the origin of the sixth rib, and barely admitted a probe one-eighth of an inch in diameter.

What, then, was the cause of death? Some of the medical men present at the dissection were disposed to attribute it to the extreme weakness of the patient; others to the influence of chloroform kept up for an hour on a patient thoroughly exhausted; some to the circumstance of the left pneumogastric nerve being engaged in the cancerous mass; while a fourth opinion compared the phenomena observed with those of an indigestion, which sometimes leads to fatal results in conditions to all appearance less dangerous. M. Sédillot thinks "that the presence of air, interposed between the parietes of the abdomen, the stomach, and other viscera, may have occasioned a tendency to peritonitis (une imminence de péritonite) sufficient to annihilate the vital powers of an individual already subjected to different debilitating causes." He suggests the following modifications in the operation and after-treatment:—

1st. To keep the wound of the stomach in apposition with that of the integuments, so as to prevent the access of air to the peritoneal cavity, and to facilitate the formation of adhesions between the visceral and parietal serous surfaces. This may be effected by using a few points of suture in addition to the canula. 2d. To abstain, during the first day, from throwing any injection into the stomach; and, during the second day, to inject a little water only, in order to re-establish the functions of the stomach gradually and slowly.—*Monthly Journ.*, from *Gaz. Méd. de Strasb.* and *Revue Médico-Chirurg. de Paris*, Dec. 1849.

29. *Two Cases of Complete Intestinal Obstruction arising from Disease of the Sigmoid Flexure of the Colon and the Rectum, in which the Descending Colon was successfully opened in the Loin.* By FREDERICK FIELD and JOSIAH CLARKSON, Esqrs. (*Proceedings of Royal Medical and Chirurgical Society*, Jan. 8, 1850.)

Mr. FIELD'S CASE.—On May 3d, 1846, the author was requested to see J. R.—, a coach-axle forger, aged thirty-three, corpulent and muscular, and accustomed to drink largely of beer. He had always enjoyed good health until a year back, when he began to suffer from pain in the bowels, constipation, and tenesmus, his stools becoming scanty, and voided with difficulty. There were also some derangement of the functions of the stomach. Three months since, all these symptoms became aggravated, and were relieved only temporarily by purgatives. He often vomited after his food; his stools were voided with more difficulty, being of a more fluid consistence, though he had not noticed any diminution in their diameter. Four days before the author's visit, the bowels had ceased to act, and all the symptoms became greatly aggravated. When seen, the abdomen was greatly distended and tympanitic; there were pain, tenderness, and some bulging over the transverse colon; the pain was paroxysmal, and accompanied by strong tenesmus; vomiting was almost incessant. Five grains of calomel, and two grains of opium were ordered, to be followed by a black draught every four hours. On the following day (May 4th), the symptoms continued unabated; the urine was scanty and high-coloured. Prussic acid and castor oil were administered at distinct intervals, and the calomel and opium continued. Some relief to the pain and vomiting was thus procured. In the evening, a purgative enema and warm bath were ordered; the injection was immediately returned, and not more than a pint could be thrown up. On the 5th of May, the colon tube was passed up, but could not be introduced more than eight inches. Twelve ounces of blood were taken from the arm; larger doses of calomel and opium, croton oil, the cold douche,

were successfully tried, but without any relief from the bowels, or other than a temporary relief to the more urgent symptoms; galvanism was equally ineffective; still, the patient's strength and spirits were sustained until the 15th, when they began to fail, and his countenance, tongue, and pulse betrayed a marked change for the worse; the matter ejected by vomiting had assumed a feculent colour and smell. It was then determined that an operation was the only resource left, and this was accordingly performed. As the patient lay on his back or belly, no indication was observable of the seat of obstruction, for the abdomen was equally swollen on both sides, and no bulging was perceptible in either lumbar region, though percussion elicited a duller sound on the left than the right side. The patient was extended on a bed with his face downwards, and a transverse incision was made in the left loin, commencing about two inches from the spine, and carried directly outwards for five inches and a half, about one finger's breadth above the crest of the ilium. The skin fat, latissimus dorsi muscle, and quadratus lumborum were successfully divided, and a shining membrane exposed. This last, which was mistaken for intestine, proved to be fascia, and when divided, a large quantity of fat was brought into view, which was carefully cleared away, and the intestine at length exposed, at a considerable depth. Sutures were passed through it, to retain it in its position, and subsequently to affix it to the edges of the wound, and an incision was then made into it to the extent of half an inch, which immediately gave exit to an immense quantity of light-coloured fluid feces. Vomiting entirely ceased, and the patient was relieved of all his urgent symptoms. The opening in the bowel being fixed by sutures to the skin, a large bread poultice was placed over the wound, and the patient was enjoined to lie on his left side. Through the following night, the evacuations continued abundant; the belly became soft and free from tenderness, and the general symptoms were still further relieved. On May 17th, the sutures had ulcerated from the intestine, which was adherent all around to the circumference of the wound. On the 18th, the wound was rather inactive; it was syringed with yeast mixed with warm water, and dressed with lint dipped in oil, the surrounding skin being smeared with cerate. Granulations subsequently sprang up, and with occasional variations and trifling drawbacks, he proceeded favourably, and his health became ultimately re-established, and he was able to follow his former calling, which required great physical exertion. The only interruption to perfect health resulted from occasional constipation, caused, apparently, in a measure, by tendency to contraction of the artificial anus, which was remedied by the introduction of a bone glyster pipe, and the injection of warm water; thus the passage was dilated, and the feces were at the same time softened. This state of things continued until the latter part of 1847, when the patient was attacked with symptoms of hepatic disease; he lost his appetite, and became emaciated and ascetic, and ultimately died in February, 1848, one year and nine months from the time of the operation. On examination of the body, the peritoneum was found covered with lymph, the liver granular and thickened, and the kidneys congested. The stricture of the intestine was found to be in the sigmoid flexure of the colon, and was about four inches in length, this portion being filled by a plug of coagulated lymph. This plug became broken up and detached by maceration in spirit, leaving the intestinal tube continuous, though contracted and slightly thickened. The plug resembled the deposit which takes place in the larynx in acute laryngitis. The artificial opening was funnel-shaped, with its apex externally; the outer orifice was contracted to the size of a small goose quill; it appeared to be lined by mucous membrane. The lower portion of the intestine was much contracted.

Mr. CLARKSON'S CASE.—B. F—, aged twenty-one a robust and healthy-looking woman, applied to the author, in July, 1846, with symptoms of dyspepsia, the bowels not having been relieved during the preceding five days. She was ordered an aperient pill and draught. Two days afterwards, she returned, the symptoms being still unrelieved, and bowels still constipated. A stronger aperient was administered, but still without relief. On the 22d (the bowels not having acted since the 14th), she complained of pain in the umbili-

cal and left hypochondriac regions; the abdomen was slightly distended and tympanitic, and pressure upon its parietes increased the pain. Constant nausea, but no vomiting; pulse 110; urine copious. To take croton oil, half a drop, every second hour. On passing the colon tube, it could not be introduced further than six inches. Two pints of fluid were injected, and returned untinged by fecal matter. The abdomen became more distended and tender; flatus moved about the bowels, and appeared to be arrested in the left iliac fossa. Leeches were twice applied, and some of Battley's solution of opium given; vomiting had commenced. Subsequently, the following expedients were tried, but in vain, to induce the bowels to act: large doses of opium, the cold douche, free injection of water into the rectum, and its retention by pressure, galvanism; and, on the 26th, the symptoms becoming more urgent, an operation was undertaken, Mr. Hodgson concurring in the propriety of the step, and urging its immediate performance. The patient was laid on her belly, a pillow being placed under the abdomen, so as to raise it. An incision five inches in length was carried outwards from the edge of the erector spinae muscle, about two fingers' breadth above the crest of the ilium; the quadratus lumborum and fascia were exposed and divided, and after some loose fat was removed the intestine was reached; four ligatures were passed through it, and fastened, two to the upper and two to the lower edge of the wound, and the bowel then divided longitudinally between them. A large quantity of fluid feces at once escaped. The patient, who expressed herself relieved, was placed on her left side, in bed. The discharge continued very profuse, and a poultice was shortly after applied. On the following day, the symptoms were further relieved, and the distension of the belly had subsided, the escape of feculent matter being abundant. From this time she steadily improved, and was able, after a time, to return to her usual household duties. Whenever the bowels became confined, aperient medicine, and an injection, relieved her; but a tendency to contraction of the bowels gradually exhibited itself, which was for a time relieved by the use of bougies. This annoyance increased, and her health began to suffer seriously. After the expiration of ten months, the patient's appetite failed, digestion was impaired, and she suffered from more constant and severe pain. The artificial anus was further dilated with sponge tents, and subsequently with the scalpel, but the constipation and other symptoms were not relieved, and she vomited nearly all she took into the stomach. She died in September, 1847, having survived the operation nearly fourteen months. On examination of the body, the parietal peritoneum was found mottled, tubercular, and thickened; the opposed surfaces of the intestine were glued together, and to the liver, spleen, and stomach; these adhesions were very firm, and sufficient to have greatly interfered with the peristaltic action of the bowels. The small intestines were distended with feces, but the transverse and descending colon were empty. The mucous membrane was ulcerated at several points; the obstruction was found to be about six inches from the anus, and on a level with the fundus of the uterus. It consisted of dense, cartilaginous substance, surrounding the intestine and completely obliterating the canal; it appeared to have originated externally, and pushed forward the fundus of the uterus, to which it adhered firmly. On section, the canal was found to be completely obliterated to the extent of half an inch. The edges of the artificial opening were rounded and smooth, and the neighbouring mucous membrane was healthy.—*Lancet*, Jan. 19, 1850.

30. *Annular Stricture of the Rectum.*—Several communications have lately appeared in the *Gazette des Hôpitaux*, containing some valuable observations made by M. ROBERT, of the Hôpital Beaujon, on circular stricture of the rectum. The number for 19th June, 1849, contains the following summary:—

Seat of the stricture. A remarkable circumstance is, that the seat of the stricture is almost always the same; viz., about six or eight millimetres from the anus. M. Robert has naturally endeavoured to discover the cause of this uniformity, but as yet without success. Houston has described a valvular stricture at this part, which bears his name, and which he supposes to be the primitive seat of the disease; but this valve has been several times sought for

in vain. However, in a woman who died of chronic diarrhoea, M. Robert discovered, at the point indicated by Houston, a sort of blackish inflated *valvula connivens*, which, if it existed in a large proportion of subjects, might be considered as the special seat of the strictures to which he refers. This is a subject for further investigation.

Causes. One case only of the annular strictures which M. Robert has had to treat, occurred in a male. The female sex, therefore, appears to have a marked predisposition to this affection. The exciting causes it is not so easy to determine.

In some cases, labour, whether difficult or not, has appeared to be the starting-point of the stricture: at least, the first symptoms have appeared after delivery. In other cases, a chronic dysentery has preceded the organic lesion, and has continued after its formation. Inquiry has naturally been directed to discover, whether the patients have been at any time affected with those venereal symptoms which are called *antiphysical*, but more properly *antiphysiological*; M. Robert professes himself able to arrive at only a negative conclusion on this point. But the assertions of patients on this subject are so rarely in accordance with truth, that doubt must necessarily be entertained on the influence of such a cause.

Diagnosis. When the stricture is not very strongly marked, the diagnosis can present no serious difficulty. The finger can always, with more or less ease, be brought to reach the stricture, and allows it to be easily discovered, when the anatomical change consists in a circular band, a few millimetres in thickness, above which the intestine is found of its normal structure and consistence. When exploration by the finger is followed by examination with a bi-valved or tri-valved speculum, there is seen a diaphragmatic ring, red, equally granular, commonly of a fibrous consistence. Sometimes this ring presents some superficial ulcerations, which never have a bad appearance. It may also be of a more delicate structure; and, in such a case, has been torn by the speculum. In no case, except when an abscess already exists in the cellular tissue of the pelvis, surrounding the rectum, is the stricture closely united with the neighbouring structures; they can be felt by the finger to be supple, and to permit the strictured and indurated part to be moved. These symptoms are quite sufficient to aid us in distinguishing this form of stricture, both from those which have their seat without the rectum, and from those which have arisen in the intestine itself.

Complications. These are rather common, and form a powerful obstacle to treatment. Sometimes they have existed before the stricture, and are generally then most serious; sometimes they occur subsequently, and are removed with it. Among the latter are rectal hemorrhages, which M. Robert has sometimes observed, but which he has never seen to assume an alarming character. Suppurative inflammation may occur, and give rise to abundant suppuration: but this accident is not very terrible; it can only occur in old cases, where there are such slender hopes of cure as have not yet been presented. A much more troublesome complication is fistulæ, which may exist above the stricture, between the rectum and the vagina, or between the rectum and the cutaneous surface. These fistulæ scarcely oppose the cure of the stricture, but persist some time after it, with a severity which is peculiar to them. In one case of stricture, there was observed at the same time an alteration in the structure of the sacrum. In a case (a male) observed by M. Robert, the rectum was perforated above the stricture, and a stercoral abscess formed, which traversed the sciatic notch, and opened in the popliteal space. But such cases are rarely the result of stricture; they most commonly precede it, and it is rather the structure itself which forms the complication.

Prognosis. When annular stricture is properly treated at an early period, there is no serious danger. But when it is left to itself for a considerable time, its severity is considerable, and it very often even ends in death.

Treatment. Several means have been proposed for the treatment of stricture of the rectum, but without sufficiently distinguishing one kind from another. In the form under consideration, M. Robert prefers destructive cauterization to all other remedies. He says that dilatation, which is generally employed, is

insufficient, and not unattended with inflammation. He has seen a case, in the practice of M. Breschet, in which it caused violent inflammation, which rapidly extended to the peritoneum, and produced death. On other occasions, dilatation has produced hemorrhages, which, without being very severe, have been distressing to the patient, and have produced a very inconvenient degree of weakness. The treatment by means of a cutting instrument is much more dangerous, and does not always produce the expected effects. For these reasons, M. Robert prefers destructive cauterization with Vienna paste; and his observations tend to prove the success and harmlessness of this treatment.—*Lond. Journ. of Med.*, Sept., 1849.

31. *On the Statistics of the Mortality from Fractures of the Head.* By Dr. FRITZE.—The following statistical statements are founded upon the careful observation of 301 cases, by Dr. Fritze, of Nassau.

1. *Results according to the nature of the injury and mode of treatment.*

	Cases.	Rec.	Died.
<i>a. Fissure or fracture without primary affection of brain</i>			
No operation on the skull	29	25	4
Removal of fragments	8	7	1
Trephined	2	2	0
	39	34	5
<i>b. Fissure or fracture with primary affection of brain</i>			
No operation on the skull	49	25	24
Removal of fragments	4	3	1
Trephined	20	6	14
	73	34	39
<i>c. Fissure or fracture with depression, without primary affection of brain</i>			
No operation on the skull	22	21	1
Removal of fragments	9	6	3
Trephined	13	6	7
	44	33	11
<i>d. Fissure or fracture with depression, and with primary affection of brain</i>			
No operation on the skull	50	39	11
Removal of fragments	26	14	12
Trephined	69	35	34
	145	88	57
	301	189	112
Thus there were treated without operation	150	110	40
" " " by removal or elevation of fragments	47	30	17
" " " by the trephine	104	49	55
	301	189	112
The trephine was employed prophylactically in	16	15	1
" therapeutically	88	34	54
" therapeutically in affection of brain without wounds	1	0	1
" therapeutically in affection of brain with wounds	8	3	5
	113	52	61

Dr. Fritze compares these results of treatment with those derived from the treatment of the cases collected by Blasius and Leisnig. From the comparison, it appears that a greater proportion of recoveries upon the whole occurred in his series of cases than in theirs; but that the results in those cases where the trephine was resorted to, were much more favourable in their cases than in his. This he explains by the fact of all his fatal cases having been the subjects of medico-legal investigation, the whole number that occurred being declared, which was probably not the case with theirs. An impartial and searching criticism of the 112 fatal cases has led the author to the conviction, that, in only 10 of the number, it was possible that trephining, or the earlier resort to this, might have preserved life. But, on the other hand, in 2 of the fatal cases, the operation seemed to be the cause of death; while in 5 of the recoveries it was probably unnecessarily resorted to. The following is the comparative view of the cases:—

BLASIUS.	Cases.	Recoveries.	Per cent.
Without operation	242	83	34.3
Trephine	422	270	64
	664	353	53.2
LEISNIG.			
Without operation	260	118	45.4
Trephine or removal of fragments	223	173	77.6
	483	291	60
FRITZE.			
Total cases	301	189	62
Without operation	150	110	73.3
Trephine	104	49	47.1
Trephine and removal of fragments	151	79	52.3

2. Results according to age.

<i>Under 15 years of age.</i>	Cases.	Recoveries.	Died.	Per cent. of recoveries.
Without operation	37	30	7	81
Removal of fragments	14	13	1	93
Trephined	18	11	7	61
	69	54	15	
<i>Adults.</i>				
Without operation	113	79	34	70
Removal of fragments	33	17	16	51
Trephined	86	38	48	44
	232	134	98	

Thus the injuries proved less dangerous to the young, and operative interference was seldom required; but when resorted to, the results were more favourable.

3. Results according to sex.

	Cases.	Rec.	Died.	Percent. of rec.
Men	274	174	100	63.5
Women	26	13	13	50

4. *Results according to the seat of injury.* A statistical examination of 291 of the cases leads to the result that the minimum of danger exists when the frontal region is the seat of injury; then the vertex; and next the occiput. The danger is the greater, the more extensive the injury is, and the more it traverses the lateral portions of the cranium, towards the basis.

5. *Results according to the cause of the injury.* From an analysis of 298 cases, in which the nature of the injury is stated, it results that it arose from a blunt instrument in 121, from a fall in 100, from a stone in 31, from a pointed instrument in 12, from a kick of a horse in 12, from a cutting instrument in 13, and

from firearms in 9. The following is the proportion in which these different injuries were recovered from, in relation to operative interference :—

		Treated without operation.	Treated by operation.
Cutting instruments	.	1.1	1
Pointed	"	1	2.3
Blunt	"	1.5	1
Stone	. . . . .	1.3	1
Falls	. . . . .	1.5	1
Kicks	. . . . .	1	1
Firearms	. . . . .	5	0

Statistics thus confirm what theory would teach us—that the operation of the trephine is successful in proportion as the cause of injury more immediately limits its operation to the part of the skull that is struck, which is most so the case in wounds from pointed bodies, and least so in those from firearms discharged close to the head.—*Brit. and For. Medico-Chirurg. Review*, Jan., 1850, from *Casper's Wochenschrift*, No. 30.

32. *Large Punctured Wound of the Rectum and Dislocation of the Coccyx.*—T. O. BLICK, Esq., has reported, in the *Lancet* (Jan. 19th, 1850), a very interesting case of this accident. The subject of it was a man aged 36 years, who, on sliding down a hayrick, came in contact with the handle of a hayfork sticking upright in the ground underneath, which penetrated the body to the depth of six inches (as measured by the blood on the handle, which is three and a half inches in circumference). He was taken home a distance of three miles, and when Mr. B. saw him, eight hours after the accident, he was in a state of collapse; pulse 62 and feeble; very sick and faint, but trifling hemorrhage had taken place. After taking some stimulants, he rallied, when an examination of the wound was made. There was found "a punctured wound in the median line midway between the anus and sacrum, through which feces had passed. Upon inserting a finger into the wound, the dislocated coccyx was felt loose in the perineum; and upon a second finger being introduced into the rectum per anum, they freely came in contact on the left side, at about the depth of three inches from each external opening. Convinced that extensive internal laceration existed, and considering that, in his falling to the ground, the apex of the handle would describe the segment of a circle, the extreme point of which I was unable to reach by the fingers, I introduced a full-sized bougie, and satisfactorily traced its progress by the lacerated side of the rectum, as far as the prostate gland. He had passed urine since the accident, showing the bladder and urethra intact. Under appropriate treatment, the patient recovered in three months; but during the hurry of the case two abscesses formed in perineo.

33. *A Preparation of an Ununited, Comminuted Fracture of the Surgical Neck of the Humerus, accompanied by Displacement of the Long Bicipital Tendon; also, an example of Unreduced Dislocation of the Radius forwards at the Elbow, with Partial Luxation of the Ulna inwards.*—Mr. CANTON exhibited to the Westminster Medical Society (Dec. 16th, 1848) specimens of these accidents removed from the right arm of an elderly female, and no history of them could be ascertained. In the first preparation, a strong fibrous capsule was formed, enclosing the ends of the broken bone, and in it were entangled the comminuted fragments, one of which was coated with porcellaneous material, in a manner similar to that part of the surface of the shaft it had played on. The shaft was drawn upwards and inwards; the biceps tendon was well retained in its new situation on the lesser tubercle of the humerus, and the articular surface of the bone was directed unnaturally outwards. In the second preparation, Mr. Canton remarked, it was interesting to observe the great degree of mobility which nature had established, though the accurately fitting surfaces of the ulna and humerus no longer rightly corresponded with each other; and this had been obtained by a modification of the form of the trochlea, and by extension inwards of its surface; so that, from this latter circumstance, the projec-

tion of the internal condyle was altogether lost. The head of the radius revolved freely in a broad cavity above the capitulum humeri, and was retained *in situ* by a strong coronary band passing from the external condyle to the anterior edge of the lesser sigmoid cavity of the ulna. The coronoid fossa was obliterated, and the pit for the olecranon nearly filled up.—*London Journ. of Medicine*, Oct., 1849.

34. *On the Use of the Exploring Needle in the Diagnosis of Doubtful forms of Pelvic and other Tumours.* By Prof. SIMPSON.—Those authors who, some years ago, wrote at great length upon acupuncture, as Béclard, Cloquet, Carraro, &c., all spoke of the impunity with which they found that acupuncture needles could be introduced into the muscles, vessels, and even the viscera of the living body. It was well known that small punctured wounds did not bleed, and the parts punctured generally closed immediately, and left little or no trace of the separation of their tissues by the puncturing instrument, provided it were small.

Taking advantage of the knowledge of these facts, it has been found that, using a small grooved needle, or very slender trocar, we can introduce it into various morbid parts, so as to ascertain the nature of their contents. Surgeons had used such exploring needles, for this purpose, in cases of doubtful tumours, in order to ascertain whether they were abscesses, or cysts, or aneurisms, &c. They have been used to explore even large aneurisms without any dangerous result. Dr. S. alluded to a case in which a celebrated surgeon was showing to his pupils the use of the exploring needle, in detecting matter in what was supposed to be an inflamed bubo, before laying it open. Air, however, rushed out, instead of pus, showing the swelling to be formed by the skin inflamed over a hernial sac.

Dr. S. mentioned that he had repeatedly used the exploring needle to detect the nature and contents of various kinds of pelvic tumour, when no other means of diagnosis were sufficient for that purpose. He especially adverted to its advantages as a means of diagnosis in some doubtful cases of pelvic abscess, and ovarian tumours, and in cases in which tumours existed about the cervix uteri, the cystic or other nature of which it was otherwise impossible to determine. Would it serve to diagnosticate cases of extra-uterine pregnancy, either by the instrument striking against bone, or by any contents that might pass through the tube?

The instrument which Dr. Simpson employed was simply a very slender silver trocar and canula, the former tipped with a very short steel point, of the form of that of a graving instrument. The tube of the trocar is open for nearly an inch at one side at its point, so as to admit more easily the escape, through the canal of the tube, of any fluid in which its point may be placed. Sometimes Dr. S. had applied an exhausting syringe to the outer end of the instrument, in order to produce the flow, along its tube, of any more viscid fluid. Thin fluids, like those of most ovarian cysts, flow readily along the tube, and can be recognized by their microscopic and other characters. When introduced into a sac containing pus, generally a few drops only of the fluid enter the tube of the instrument, from which, however, it can be readily forced, after withdrawing the instrument, by blowing through the tube. If our microscopic characters of specific tumours and morbid structures were more exact than they are at present, the pathologist might ascertain the nature of most morbid tumours that might appear in the living body, by the use of such an instrument, for he could remove by it a sufficient amount of its structure or contents for histological purposes.—*Monthly Journ. Med. Sci.*, Feb. 1850.

35. *Method of preventing the Ingress of Air in evacuating large Collections of Fluid.* By M. RACIBORSKI.—In evacuating large chronic abscesses, tapping the chest for pleural effusions, and similar cases, the entrance of air after the operation is effectually prevented by making an oblique subcutaneous puncture. Air may enter, however, during the operation, and many plans have been had recourse to for preventing this accident. M. Raciborski has adopted the following proceeding with success: A bladder proportionate in size to the amount of fluid to be evacuated is softened by soaking it in water; it is then squeezed

to force all the air out of it, and the orifice of the bladder is afterwards fixed on the canula of the trocar, the handle of the instrument being within the bladder. After the introduction of the trocar into the collection of fluid, the handle can be seized through the bladder, withdrawn, and left loose in the bladder. The bladder at once begins to expand from the entrance of the fluid, which is evacuated without the patient being annoyed by the sound which accompanies the discharge of the fluid in free air.

Should the distension of the bladder show that there is more fluid than it will contain, all that is necessary is to puncture the bladder at its upper end, taking care at that moment to press the bladder against the opening of the canula to prevent the ingress of air. The bladder, once emptied, is to be secured by tying a ligature over the puncture made into it, and allowed to fill again.—*Monthly Journ.*, Feb., 1850, from *Bulletin de Thérapeutique*, Dec., 1849.

36. *Gutta Percha Bougies*.—Mr. TUFNELL communicated to the Surgical Society of Ireland (Nov. 28th, 1849) the details of a case of stricture of the urethra in which he passed a gutta percha bougie No. 7 the whole length of the patient's urethra, on four different occasions. On the last, soon after the introduction of the bougie, he was called away, and, not expecting to be detained more than a few minutes, left the patient with the instrument in. Circumstances, however, prevented his returning for about an hour and twenty minutes; upon doing so, he proceeded to withdraw the bougie, but found it to be firmly held, and upon making sufficient traction on the instrument, instead of its quitting the urethra, the portion encircled by the glans began to draw like a piece of heated sealing wax. By desisting from further efforts, threading the penis back on the bougie, and gentle manipulation, the instrument came away entire; but a very little additional force would have been sufficient to tear it in two, and had it separated, the patient would have been plugged throughout.

In bringing this case before the society, Mr. Tufnell stated that he did not look upon it as arguing so much against the use as against the abuse of gutta percha. This material would not (to judge from the case then before the society) withstand the combined effects of heat and pressure for a lengthened time, but for ten minutes or so, the period ordinarily occupied in the use of a bougie, it answered admirably.

Mr. Tufnell showed one of these instruments, which he had used upwards of a hundred times, and the only effect produced upon it was a slight disposition to untwist, but not to a degree sufficient to prevent its further use.

With regard to the employment of gutta percha bougies, Mr. Tufnell's experience was, that the sizes below No. 6 were useless in the treatment of stricture, being so flexible and limp as to prevent the surgeon from having sufficient control over the point; but that from No. 7 upwards, they answered every desired end, being flexible to meet the curve of the urethra, not in his experience more irritating than gum elastic, if perfectly oiled, yet cheaper and more lasting than any other kind.

Dr. GEOGHEGAN drew attention to the extreme brittleness of some specimens which fell under his own observation. Not long since he had a case under his care in the City of Dublin Hospital, where, during the withdrawal of the instrument from the urethra, it broke off in two different places. The bougie having been allowed to remain in the urethra for half an hour only, when he proceeded to remove it, two distinct fractures took place; and subsequently he was obliged to extract one portion of the instrument by means of an incision into the membranous portion of the canal, and a second fragment worked its way out of the urethra, and had to be removed by an incision on the eleventh day after the accident. He believed it would be found that the gutta percha instrument, when left for any length of time in the urethra, was more likely to excite irritation of the mucous membrane than the gum-elastic catheter; a circumstance which he was inclined to attribute to adulteration of the gutta percha from which these new bougies were made.

Dr. MORGAN stated that, in a case which fell under his observation, a No. 8 bougie of gutta percha had broken across, about half an inch from the orifice,

and that, by making pressure on the perineum, he succeeded in regaining the retained portion of the instrument. He had since carefully examined the bougie used on this occasion, and entirely coincided in the opinion of Dr. Geoghegan, that the accident was solely attributable to the impurity of the material from which it was fabricated.

Dr. ALDRIDGE, having been employed by the patentees for the purpose of examining the properties of gutta percha, would be happy to give the society the benefit of his experience. At the time he was engaged in the examination of this substance, he found it necessary to perform a variety of experiments, the results of which it might be worth while to mention. In the first instance, he might state that the strength of gutta percha was very much injured by heat. As regarded its composition, it might be described as a kind of solid emulsion of water combined with oils. The natural combination of the water with the solid oils appeared to be necessary to give the gutta percha its full degree of strength. Naturally, it possessed an extraordinary degree of tenacity; so much so, that on one occasion he supported a weight of two hundred and thirty pounds by a circular band of one-fifth of an inch in diameter. Now, if they applied heat to gutta percha, and afterwards formed it into a band, they would find that its tenacity had become considerably impaired. With respect to its natural strength, as compared with other substances, he might mention that, nearly two years since, he performed some experiments with a view to ascertain its tenacity, as compared with that of leather and other substances, and he arrived at the conclusion that gutta percha was much stronger than leather, and that the admixture of all other substances with it invariably diminished its strength. It was therefore quite natural to suppose that its tenacity must be more or less injured by admixture with lampblack, which was confessedly employed in the manufacture of these bougies; but, at the same time, he discovered that its liability to get soft under the influence of heat was increased by the addition of every substance, with the exception of lampblack or plumbago. These, it was worthy of remark, diminished its power of becoming soft under the power of heat, but every other substance had quite a contrary effect; and he therefore advised the patentees to make their bougies with lampblack, or finely powdered carbon. If well mixed, the diminution in the tenacity of the material would be scarcely worth mentioning, for, if rightly managed, it ought still to be much stronger than leather. It might have been in consequence of an over-dose of plumbago that the bougies, referred to that evening as having given rise to so many accidents, had become brittle.—*Dublin Med. Press*, Nov. 28th, 1849.

At a subsequent meeting of the society (Dec. 15th), Dr. JACOB made some interesting remarks on the advantages of gutta percha as a material for surgical purposes. This substance appeared to him, he said, to possess qualities of singular importance to the surgeon; and though he was aware that many of his professional brethren were in the habit of employing it extensively in their practice, yet he would take the liberty of calling the attention of those who had found fault with the substance, to the really important advantages which, under proper management, might be derived from its employment. The principal objection which had been raised to the use of gutta percha at the former meeting had reference to the alleged perishability of the article, its fitness for the manufacture of catheters having on that ground been called in question, owing, as it was stated at the time, to an impression that a bougie constructed of gutta percha was liable to corrode after remaining for a certain period in the bladder. Now, this objection appeared to him to be wholly untenable, and it was proved to be so, beyond all possibility of doubt, by the result of an experiment he lately performed with a view to test the durability of the substance. The experiment was this: He took the first gutta percha bougie which lay within his reach, and immersed one end of it in urine for the space of a fortnight, and yet when he came to examine the instrument at the end of this period, he was unable to detect the slightest alteration in the gutta percha of which it was constructed, except that it was somewhat roughened on the surface from an encrustation of urinary deposits; in fact, it would be difficult to say which end had been immersed.

It was said that it could not with advantage be substituted for India rubber or any of the substances which had hitherto been used in the manufacture of catheters; but the fact was that India rubber was not employed for this purpose at all. It was only used as one of the ingredients in the varnish which was laid on the outside of the instrument, and many gum-elastic catheters were varnished with a substance which contained no India rubber whatever; indeed, it was a comparatively friable varnish which was generally employed for this purpose, and it was therefore their duty, if it lay in their power, to provide a substitute for it. No doubt the gum-elastic catheter was a very convenient instrument for gentlemen who did not mind paying a high price, but he would strongly recommend the junior members of the profession to manufacture instruments for themselves of gutta percha; for, independent of the point of economy, they would thus acquire an acquaintance with the physical properties of their instruments. It had also been said, that there was no necessity for resorting to the use of the gutta percha catheter, more especially as it was liable to break whilst being withdrawn from the bladder. In raising this objection, it was, he supposed, inferred that the gum-elastic instrument never met with a similar accident; but, since the subject was last under discussion, two cases in which gum-elastic catheters had broken in the urethra had come to his knowledge. The first of these catheters broke off short in the hand of Mr. Trant, and he was obliged to cut into the bladder in order to recover the end of the instrument. This catheter, which was exceedingly brittle, consisted of a gum-elastic varnish laid on a silk foundation, and he had himself seen several other gum-elastic ones break across in the same manner. In the other case, a gum-elastic catheter, and what was strange, one which had not previously been used, broke across in the bladder, requiring, as in the former case, an operation for its extraction.

With respect to the statement that gutta percha was too flexible for the purposes of a bougie, he might observe that its limpness was only of importance in the case of the smaller instruments, and this defect might easily be supplied by making them upon a foundation of catgut, whalebone, or wire. The larger instruments were quite stiff enough for every purpose. Another complaint was that, when these catheters were in the urethra and exposed to a temperature of 98°, they became liable to yield when an effort was made to withdraw them. On a former evening, Mr. Tufnell had brought forward a case in which a spurious gutta percha bougie began to yield as he was drawing it out of the urethra, and, upon examining that instrument, it was found to be exceedingly ductile. Now, this ductility was owing to the use of impure gutta percha in the manufacture of the bougie in question, for the article in a state of purity was possessed of enormous strength. When making these instruments for themselves, it was right to bear in mind that there was an impure species of gutta percha sold in some of the shops, and that there was another kind, darker than the other, which was the best for surgical purposes. The kind he alluded to was of a deep black hue. He had been induced to refer to this subject, because he recollects a time when a similar opposition was raised against the introduction of the gum-elastic instrument, which was a good while in use before it was brought into its present state.

Dr. STAPLETON said he could state, as a fact, that not a particle of gum-elastic was used in the manufacture of the gum-elastic catheters at present sold in the shops. Their foundation consisted of a woven fabric, something like what was employed in the manufacture of cutting-whips. This was steeped in drying oil and dried, and the same process was repeated until it had received several coats, after which the fabric was put into a stove and dried; having acquired a sufficient consistency, it was polished by friction with water and pumice, or oil and pumice, and lastly varnished. Dr. Stapleton then went on to say, that he had seen cases where gum-elastic catheters were broken in the bladder from imperfect manufacture. He remembered being present on one occasion when this accident happened with the celebrated Baron Dupuytren. In this instance, the coating of the catheter remained in the bladder, and the silk came away. When left in the bladder more than two or three days, the gum-elastic was almost sure to become blistered—that was, the coats of the instrument separated

from one another, and the longer the catheter was left in the bladder, the greater would be the number of coats which separated; in fact, in some instances, where it had remained in the urethra for a considerable time, these coats might be stripped off, layer after layer. With respect to the use of gutta percha in the manufacture of bougies, he might remind the society that catheters of this material had been very generally adopted in the Parisian hospitals, where they had been found exceedingly useful and efficient; but he did not agree in Dr. Jacob's opinion that the strength or quality of a gutta percha catheter could be satisfactorily tested by being steeped in urine, for it was well known that this substance was less likely to be affected by cold liquids than by hot, and though gutta percha might not be corroded by the action of cold urine, yet the case might be very different if it was left for a considerable time in the bladder. He, for one, expected the greatest advantages from the use of gutta percha for surgical purposes. It formed admirable splints, and was of the greatest possible value in the treatment of injured elbow and ankle-joints. It was also, as Dr. Jacob had remarked, an excellent material for water-dressings; and on the whole, must, he thought, be looked upon as a great boon to the profession.

Mr. TUFNELL stated that, since the former meeting of the society, he had made some experiments upon the instrument referred to by Dr. Jacob, and upon genuine gutta percha of a similar size. He found the material of which that bougie was composed to be so ductile that, at the temperature of the atmosphere, he had drawn it between his fingers into fourteen different lengths, forming, as it were, a succession of knots, whilst gutta percha he could not make to yield, though the ends were wound round his hands, and he exerted considerable force. He next placed portions of the instrument into naphtha for forty-eight hours. They became friable, and broke short across like bread, whilst gutta percha was only slightly softened, or rather rendered greasy on the surface. The substitution of a spurious article for the genuine material argued nothing against the latter, except the necessity of being careful in the selection of instruments, and perhaps testing them prior to use. Good gutta percha would resist almost every agent but heat. Mr. Tufnell had immersed some in the purest nitric and acetic acids, as well as acid nitrate of mercury, for several days. They were unaffected—the fluids unchanged. He considered gutta percha as every way adapted for bougies; he had employed them extensively in dispensary and private practice ever since they had been first introduced. Latterly (in consequence of the observations made by Dr. Jacob at a former meeting), he had made some of these instruments for himself, and begged to present to the society specimens of his work which had been already in use. The cheapness of gutta percha was another point in its favour. The material of which the bougies then before the society was composed, did not cost more than one farthing a piece. This, together with the facility with which they were made, ought to bring them into the market at a much lower rate than any other elastic kind could possibly be produced. An objection had been made to the want of polish on gutta percha bougies. This Mr. Tufnell had not found a practical objection, when the instrument was thoroughly oiled; but, to remove any prejudices on the subject, he had endeavoured to get some coated with varnish. This he had tried to have done in Dublin, but had failed; he had consequently forwarded the instruments to London, and hoped it might be accomplished there.—*Ibid.*, Jan. 2d, 1850.

OPHTHALMOLOGY.

37. *Tumours of the Eye and Orbit.*—Dr. JACOB, at a meeting of the Surgical Society of Ireland (Jan. 12th, 1850), drew attention to two tumours, one removed from the eyelid, the other from the eyeball, of patients who had been under treatment by himself in the City of Dublin Hospital. It had been his intention, he said, to have drawn up a paper giving a more detailed account of the history and treatment of these tumours, together with a statement of the opinions which, from his observations of these and other cases, he